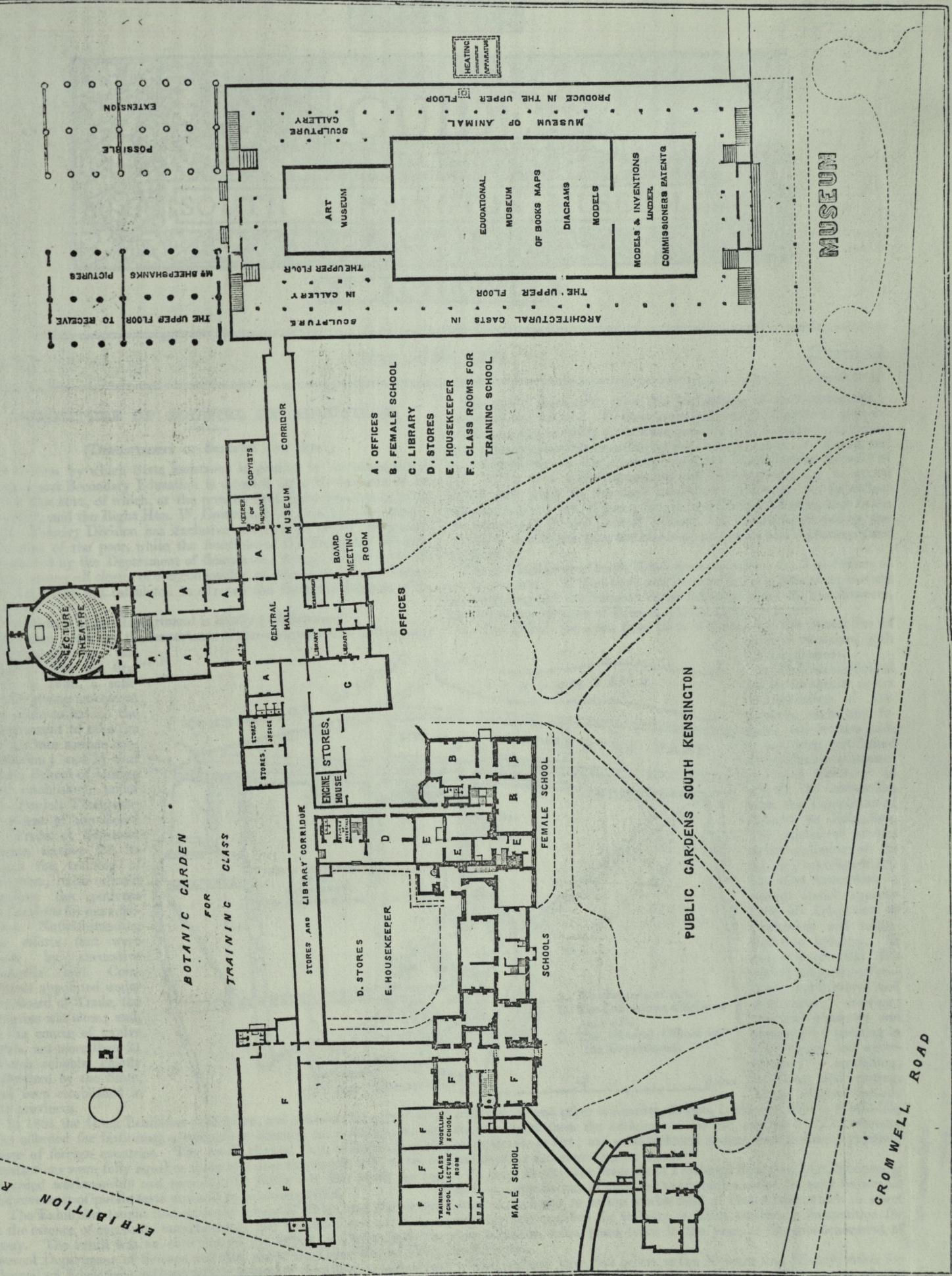


PLAN OF THE MUSEUMS AND SCHOOLS AT SOUTH KENSINGTON

Archives





**GUIDE
TO THE
SOUTH KENSINGTON MUSEUM.
BY AUTHORITY.**

No. 1.]

20TH JUNE, 1857.

[PRICE 1d.

COMMITTEE OF COUNCIL ON EDUCATION.

(DEPARTMENT OF SCIENCE AND ART.)

The system by which State assistance is granted in the promotion of Primary and Secondary Education is directed by a COMMITTEE of the PRIVY COUNCIL, of which, at the present time, Lord GRANVILLE is the President, and the Right Hon. W. COWPER, M.P., the Vice-President.

The Primary Division has exclusive reference to aiding the general Education of the poor, while the functions of the Secondary Division, represented by the Department of Science and Art, are to aid in the diffusion, among *all classes* of the community, of those principles of Science and Art which are calculated to advance the industrial interests of the country.

The history of this Department is briefly as follows:—

Nineteen years ago the importance of Art-education was still publicly unrecognized in this country. For the first time, in 1838, a sufficiently strong movement was made to induce the Government to take the subject into serious consideration; and in that year a School of Design was established, under Mr. Poulett Thompson, President of the Board of Trade at Somerset House, having for its object the training of designers, who should improve the patterns and designs for manufactures. Notwithstanding the efforts that were made by successive Councils and Committees appointed under the Board of Trade, the progress was slow; and, in the course of twelve years, not more than 21 branch schools, chiefly subsidized by the State, had been established in the provinces.

In 1851 the Great Exhibition took place, and a favourable opportunity was afforded for instituting a comparison between our manufactures and those of foreign countries. The result showed that, although English productions were fully equal to those sent over to compete with them, as regarded workmanship and material, the public felt that much for the improvement of public taste was still to be accomplished.

The Exhibition taught that art is the parent of design, and that design is the essence of successful manufactures; and the lesson was not thrown away. The result was an extension of the School of Design into the present Department of Science and Art, under the Committee of Privy Council on Education; self-supporting instead of subsidized schools were stimulated into being, and the education in Art of the whole people, and not a class merely, became the object of the new department. A nucleus of a permanent Museum of Works of Art was formed and deposited at Marlborough House, and now forms part of the various collections exhibited at South Kensington.

The special objects for which this Department of the Government is now organized are:—1. To train male and female teachers to give instruction in Art, to certify them when qualified, and to make their annual fixed payments, varying according to their acquirements. 2. To aid and assist Committees in the provinces desirous of establishing Schools of Art. 3. To hold public inspections and examinations, and to award medals and prizes to the most deserving candidates. 4. To collect together works of art, pictures, &c., in the Central Museum, and books and engravings in the Central Library. 5. To circulate among the Schools of Art objects from the Museum, and books and engravings from the Library.

The new buildings at South Kensington embrace:—1. The Offices of the Department. 2. The Male and Female Training School for masters and mistresses, and the Normal Central School of Art. 3. The Museum, devoted to the purposes of Education in its various branches.

1. The Offices are open from 10 to 4 o'clock for the transaction of business connected with the Department.

2. The Training School has for its special object the education of Art-teachers, male and female, but it also aids in supplying certificated Art-masters or mistresses to teach drawing to schools in connection with the Committee of Council on Education. The course of studies embraces, besides all the ordinary branches of Art-education, instruction in various direct applications of Art-power to mechanical and manufacturing industry. It comprehends the following subjects:—Freehand, architectural, and mechanical drawing; practical geometry and perspective; painting in oil, tempera, and water-colours; modelling, moulding, and casting.

These classes include

- A. The Schools of Art.
- B. The Collections of Science and Art.
- C. The General Offices of the Department.

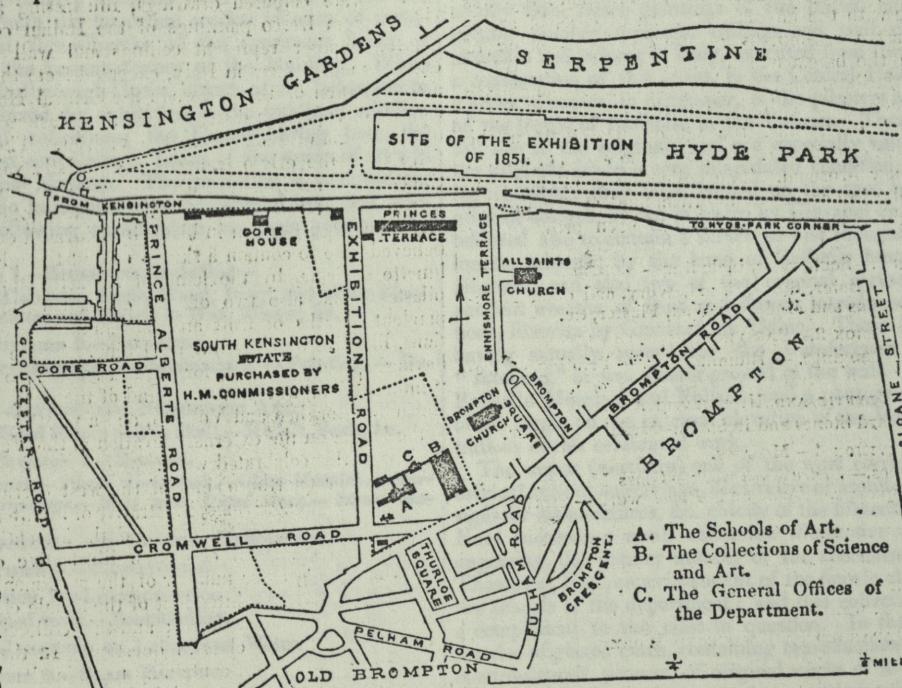
architectural and other ornaments, flowers, landscape, objects of still-life, &c., the figure from the antique and the life, and the study of anatomy as applicable to Art; and some technical studies, such as enamel painting, and drawing and engraving on wood.

In order to stimulate students of Provincial Schools of Art, by opening to them opportunities of pursuing their studies under the most favourable auspices, and also to secure a wide field of choice from which to select students best qualified for training as future masters, a competition for free admission takes place twice in the year, at the commencement of each session.

The students have full access to the Museum and Library, either for consultation or copying, as well as to all the public lectures of the Department. Special classes are arranged in order to qualify school-masters and schoolmistresses of parochial and other schools to teach elementary drawing as a part of general education.

The Provincial Schools of Art on a self-supporting basis at present

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number sixty-five, and have been established in various parts of the country. In the last published returns, the number of persons under Art-instruction in the United Kingdom amounted to 31,455, at an average expense of 16s. 2½d. per head. This result shows the success that has attended the present management; as no more than five years before, when the Department was established, the number of students taught in the Schools of Design was only 3,296, at an average expense of £3. 2s. 4d. per head. The Provincial Schools are all placed under the management of Local Committees, who appoint the masters and conduct the schools; the only interference of the Department being to see that the instruction corresponds with the course sanctioned.

3. The present buildings at South Kensington must be considered as only provisional, until a suitable permanent structure has been provided. The offices were erected by the Board of Works, the wooden schools removed from Marlborough House, and the old brick houses formerly inhabited by Mr. Justice Cresswell and Lord Talbot adapted to school purposes. The brick gallery was erected purposely by the Department to receive Mr. Sheepshanks' gift of pictures and drawings, while the iron building was constructed under the direction of the Commissioners for the Exhibition of 1851, and not passed over to the Department until after it had been completed. The Library consists at present of upwards of 5,000 volumes and 100 portfolios of prints, drawings, &c., relating to ornamental manufactures and decorative art. It is emphatically a special Library, the object of which is to aid in every way the development of taste as applied to industrial Art.

The description of the contents of the Museum of Ornamental Art and the British Gallery of Fine Art will be found elsewhere.

The walls of each department of the Museum are painted a different colour, which alone will serve as a guide to the visitor. A Plan suspended opposite the entrance, and coloured in accordance with these divisions, may be consulted with advantage before the inspection of the Building is proceeded with.

THE MUSEUM OF ORNAMENTAL ART.

THE Museum of Ornamental Art was founded in 1852, and, by permission of the Queen, a suite of rooms in Marlborough House was appropriated to the reception of the collections.

Being enriched by daily acquisitions, the Museum remained open to the public at Marlborough House until February last, when it was closed for removal to the present building. The specimens had by that time accumulated to such an extent as entirely to outgrow the space available for their display, and a great number of interesting objects were, in consequence, unavoidably withheld from exhibition: this was more particularly the case with the important section of casts of architectural ornament, at least three-fourths of the specimens being of necessity stowed away in the basement story of the building. While the Museum remained at Marlborough House, objects of art, belonging to private collectors, were received for exhibition to the public in addition to the permanent national collections, the Queen having been the most frequent and the largest contributor. Loans of fine works of art will also be admitted in the new Museum. The collection is intended for the instruction of the public in decorative or ornamental art; and, with this object in view, the following classification has been provisionally adopted:—

DIVISION 1.—SCULPTURE, including—

Carvings, &c. in Marble, Alabaster, Stone, Wood, Ivory, and other Materials.—Art-bronzes.—Terra-cottas and Models in Wax, Plaster, &c.

DIVISION 2.—PAINTING.

Wall-decoration.—Paper-hangings.—Illuminations.—Printing.—Designs, &c.

DIVISION 3.—GLYPIC AND NUMISMATIC ART.

Cameos and Intaglios in Hard Stones and in Shell.—Medals, Seals, &c.

DIVISION 4.—MOSAICS.

Mosaics of Calcareous Stones.—*Pietra dura* work.—Glass Mosaics.—*Marqueterie*.—*Intarsialatura*.—*Parqueting*.—*Buhl* and *Pique* work.—Straw Mosaic, &c.

DIVISION 5.—FURNITURE AND GENERAL UPHOLSTERY.

DIVISION 6.—BASKET-WORK.

DIVISION 7.—LEATHER-WORK.

Stamped work.—Bookbinding.

DIVISION 8.—JAPANNED OR LACQUERED WORK.

DIVISION 9.—GLASS PAINTING.

DIVISION 10.—GLASS MANUFACTURES.

DIVISION 11.—ENAMELS.

DIVISION 12.—POTTERY.

DIVISION 13.—WORKS IN METAL.

Wrought, Cast, and Stamped works in general.—Chasing, Engraving, Etching, &c.—Instruments and Utensils.—Locksmiths' works.—Goldsmiths' works.—*Damasquinerie* or Inlaying.—*Niello* work.

DIVISION 14.—ARMS, ARMOUR, AND ACCOUTREMENTS.

DIVISION 15.—WATCH AND CLOCK WORK.

DIVISION 16.—JEWELLERY.

Personal Ornaments.—Objects in precious materials.

DIVISION 17.—TEXTILE FABRICS.

Costumes and Garment Tissues.—Lace.—Embroidery.—Carpets.—Hangings.—Woven Fabrics in Grass, Straw, &c.

This classification will, however, undergo revision, and the Museum

is intended henceforth to include other categories of works of art, not as yet represented in our national collections.

At the present time only a small proportion of the collection of original specimens, which now numbers upwards of 4,000 objects, can be exhibited. The reasons for this deficiency are, that a selection consisting of 1,000 specimens, including the entire acquisitions from the Bernal collection, has been sent to the Manchester Art-treasures Exhibition; that a further instalment of several hundred objects in every class has, for the last three years, been circulated for exhibition in the various provincial towns in which schools of art are established;* and that, lastly, it has been decided to await the completion of the new fire-proof rooms behind the present building, and under the Sheepshanks' Gallery, in order to avoid the risk of exposing many rare and valuable objects in the iron building. The collection of original specimens now exhibited, consists, therefore, mainly of the bulkier objects of furniture, &c. &c., and of works of modern origin, purchased from the Paris Exhibition of 1855, which, from want of space at Marlborough House, have not yet been seen by the public. But, on the other hand, the extensive series of reproductions, consisting of plaster-casts, electrotype copies, coloured drawings, engravings, &c., not hitherto exhibited, are now classified and arranged.

The west corridor is mainly occupied by the latter class of works; and with these the brief description of the various collections here proposed to be given will be commenced, the specimens being among the first objects seen by the visitor on entering the building—beginning with the collection illustrative of architectural ornament, which consists of a series of many hundred plaster casts, moulded from details of ancient edifices, or from fragments preserved in museums. The first, second, and third bays or courts, formed by projecting screens, contain examples in the antique Greek and Roman styles, and a number of models, being accurate restorations to a scale, of celebrated buildings, accompany them. On the pedestals of the latter are hung photographs, which represent these buildings in their actual state of ruin and dilapidation. These models were made for Mr. Nash, the architect, and have been removed from Hampton Court by permission of the Office of Works. Casts of the revived classical or renaissance style of Italy, France, Flanders, &c., come next in order, occupying three other bays.

On the screens on the right hand, opposite the casts, and corresponding as to date, style, &c., are hung drawings, engravings, and photographs, illustrative of architecture and ornament.

The collection of architectural casts is contained in the gallery above this corridor; the extensive series of Mediæval specimens, belonging to the Architectural Museum, are described hereafter.

The renaissance casts are accompanied, on the wall opposite to them, by elaborate coloured drawings, illustrating painted mural decoration, chiefly from fresco paintings of the Italian cinque-èento period. The greater number represent ceilings and wall compartments of various churches and palaces in Italy, executed from the original frescos; and as a continuation of this series, in the Central Hall (North), will be found a series of copies, in distemper, of the pilasters and ceiling compartments of the loggia of Raffaello in the Vatican. These last copies are of the full size of the originals, and are especially valuable from the fact, that the originals are in a very dilapidated condition, and are rapidly becoming invisible: they were copied on the spot by Italian artists. Two original designs, drawn in bistre by Giovanni da Udine—one of which is believed also to contain a sketch or first thought for one of the historical lunette subjects, by the hand of Raffaello himself—are hung near the pilasters; and also two of the original cartoons for portions of the pendent wreaths of fruit and flowers introduced into the loggia decorations, likewise by Giovanni da Udine. These latter bear the marks of having actually served for the transference of the design to the "intonaco," or wet plaster ground of the wall. Coloured engravings by Raffaello Morghen and Volpato, and a photograph showing the position of the loggia on the external elevation of the Vatican, complete the illustrations of this celebrated work.

The upper (northern) end of the west corridor also contains series of original ancient engravings, illustrative of architecture, pure ornament, designs for manufactures, &c. chiefly of the fifteenth and sixteenth centuries. Next succeeds a small collection illustrative of the history of wood engraving, the greater number of the specimens being the gift of John Thompson, Esq., superintendent of the female class for wood engraving in the schools of the department; and this collection is mainly intended as a compliment to the class in question. In the corridor also is placed a series of glazed cases, containing reproductions, chiefly by means of the electro-deposit process, of original works of art in the section of goldsmiths' work, decorative arms, &c., part being from objects preserved in this Museum, and part from the collections of the Louvre, the Musée de Cluny, and the Musée d'Artillerie, in Paris; these copies having been obtained by permission of the French Government. Here there also will be found a series of coloured photographs, representing some of the most important works of art in the Louvre, and other French collections, such as Limoges enamels, crystal gold-mounted cups, and vases, ivories, &c.†

The series of original objects now exhibited, as we have said, is for the

* During this period this collection has been temporarily exhibited for periods varying from four to six weeks in fourteen towns, and the entire number of visitors has been about 110,000.

† Copies of photographs, and of all reproductions, both in metal, plaster, &c., may be obtained from the several persons by whom they have been produced, at prices regulated by the Department, and subject to the published rules.

present of limited extent. Two central stands or tables are placed in this part of the corridor; on one of them is arranged a collection of works of art-manufacture, chiefly porcelain, from the Royal Manufactory of Sévres, purchased from the Paris Universal Exhibition of 1855; and the corresponding platform contains similar specimens of English origin, also in great part purchased on the same occasion: the products of the manufactory of Messrs. Minton and Co., especially the revivals of the Italian majolica ware by that firm, are here the most notable objects. A large jardinière or flower-stand for a conservatory, should be remarked as one of the most important specimens of the ceramic art ever produced in this country. The windows at the end of the corridor are filled with specimens of ancient and modern painted glass; this collection, comprising many specimens of great rarity and beauty, especially a large window, in three divisions, of the 15th century, said to have been originally brought from Winchester College. The original specimens are accompanied by a collection of framed drawings and coloured engravings of painted glass, amongst which should be specially noticed a series of drawings or cartoons for heraldic window-glass, executed by ancient artists of the school of Basle: these are chiefly of the 16th century.

The Central Hall (North) is entirely occupied by the larger objects formerly exhibited at Marlborough House, chiefly in the class of furniture. The copies from the frescos of the loggia of Raffaello, hung round the walls, have been already alluded to: these ought more properly to have followed in sequence with the rest of the specimens illustrative of mural decoration placed in the corridor; but the height of the pilasters would not allow of their being so placed. For the same reason the colossal statue of David by Michael Angelo (plaster cast) has been unavoidably placed in the centre of this hall. This celebrated work was recently moulded for the first time by the Tuscan Government; and this cast (a present from the Grand Duke of Tuscany) will, for the first time, enable those who have not visited Italy to form a true conception of, perhaps, the most notable work in sculpture of the great Florentine artist. At the base of this cast is a small glass case, containing a collection of original models in wax and clay by the hand of Michael Angelo, being first thoughts or sketches for several of his most celebrated works: among them a small model in wax, about four inches high, is believed to be the first thought for the statue which towers above it. These models were purchased by Government three years ago, and have been already exhibited at Marlborough House.

Among the objects of furniture, ecclesiastical and domestic, are several beautiful carved cabinets, in oak, ebony, walnut, and marqueterie of coloured woods, &c., of Italian, French, and Flemish origin, dating from the first half of the 16th century; coffers of mediæval date, 15th century; and finely-carved and gilded Italian linen-chests of cinque-cento work. A series of richly-decorated mirrors, of various countries and periods; and two large altar-pieces, the one in carved stone, richly painted and gilt (brought from Troyes, in Champagne, and dating in the earliest years of the 16th century); the other is carved oak, of somewhat earlier date (brought from the Cathedral of St. Bavon, at Ghent): the last two objects deserve particular attention as highly important monuments of ecclesiastical art. And the visitor will notice several elaborate specimens of wrought-iron work on a large scale, window gratings, portions of screens, gates, &c.; and also the bronze globe clock, in the centre of the hall, which is the largest and most effective specimen of a very numerous series of decorative clocks, timepieces, watches, &c., not yet exhibited.

At the upper part of the east corridor, a division or court is appropriated to specimens of ornamental art manufactures in various categories,—especially rich Indian tissues—Chinese and Japanese porcelain and lacquered work, decorative arms, bronzes, objects in marqueterie, damascene work, &c. The original specimens are accompanied by a series of coloured drawings, illustrative of oriental art generally.

It is intended that every specimen should, as soon as possible, be accompanied by a descriptive label, containing the name, date, and all other details of the object judged necessary. The rapidity with which the collection has been arranged has not admitted of this being yet carried out.

THE EDUCATIONAL COLLECTIONS.

THE Educational Collections, occupying the central portion of the Iron Building, originated with the Society of Arts, which organized an Exhibition of Apparatus, Diagrams, and Books, in St. Martin's Hall, in 1854. Of the contributions to that Exhibition, about 3,200 volumes of books and 1,300 pamphlets, maps, &c., a few models, and some educational apparatus, were presented to the Society. The greater number came from foreign countries, and nearly one-fourth from the Board of Education of New York. These donations were subsequently offered by the Society to the Committee of Council on Education, and are now among the contents of the present Museum.

In the arrangement of the collections a system of classification has been strictly observed, with especial view to its utility for reference. The divisions are principally *School Buildings and Fittings*, *General Education*, *Drawing and the Fine Arts*, *Music*, *Household Economy*, *Geography and Astronomy*, *Natural History*, *Chemistry*, *Physics*, *Mechanics*, *Apparatus for Teaching the Deaf and Dumb*, *Idiots*, &c., and *Physical Training*.

The specimens exhibited under each of these divisions are arranged so as to enable all persons engaged in teaching to see, collected together in one group, the most recent, the best, and the cheapest forms of apparatus and means of imparting knowledge in its several branches—with the prices of the specimens, and where they can be obtained—enabling them to compare one specimen with another, and to select that which may best suit their requirements. It has also been an object, in labelling the speci-

mens, to do so in such a manner as will convey as large an amount of information as possible, appealing, in some measure, like diagrams in lectures, through the eye to the understanding.

Entering from the Museum of Patents, or the south end of the building, the first division is the Mechanical, including hydraulics, pneumatics, hydrostatics, &c., occupying the end wall, the right hand recess, and the glass cases. The largest exhibitors are—Professor Willis (mechanical powers, &c.), Messrs. Rigg, of Chester (mechanical models and apparatus), Griffin (whose specimens extend to the physical and chemical divisions), and Elliot (hydrostatics and pneumatics). There is also a large collection of French apparatus, the property of the Department. In this class, an excellent sectional model of a steam-engine, by Hughes of Greenwich, deserves notice, as well as Newton's productions; and Horne and Thornethwaite's may be mentioned as the cheapest in the collection. The two next recesses, with the glass cases before them, contain physical and chemical apparatus and diagrams, principally from Newton, Horne and Thornethwaite, Elliot, and Griffin. The first exhibits microscopes in the recess, and the second a large collection of apparatus for galvanic, voltaic, and frictional electricity, in the glass case. In the next recess, geography and astronomy, is a large collection of maps and astronomical diagrams, some globes, and some orreries by Newton. In the nave, opposite, stands the Astronomer Royal's model of the Greenwich transit circle, to which we shall return presently.

In the Botanical Division, Prof. Henslow contributes a valuable collection of botanical specimens, a case illustrative of the physiology of fruits (exhibited at Paris in 1855), and a set of botanical diagrams prepared for the Department of Science and Art. The Entomological Society contributes a collection of entomological specimens adapted for instruction; Prof. Tennant a similar collection, illustrative of mineralogy and geology; Mr. Sopwith, geological models; and Mr. Waterhouse Hawkins, models of extinct animals. The last recess on this side, together with the end wall and the two opposite recesses, is devoted to drawing and the fine arts. In this the Department is the principal contributor, exhibiting the casts and examples used in the art-schools, and the drawing-copies supplied at a reduced cost to public schools. There also are some copies of statues, reduced by machinery: they are, Germanicus, Diana, Jason, and the Wrestlers, from the Greek originals; and one of Michael Angelo's Slaves, designed for the monument of Pope Julius II. They are from Sauvage of Paris.

Proceeding down the left-hand side of the Museum, beyond the Art-division, the visitor reaches the recesses, containing objects of Household Economy (illustrated more fully by Mr. Twining, in the East Gallery), apparatus for teaching music, and that for the deaf and dumb, &c.; and, opposite, in glass cases, examples of object-lessons sent by the Home and Colonial, the School, and the British and Foreign, Societies, and by Meyer, and specimens of instructive toys, among which the kinder-garten may be especially mentioned. The upright case containing the latter, with two others placed near it, are curious, as being constructed from designs by Prof. Semper to illustrate all the leading varieties of the ornamental woods of Australia.

The next recess contains the miscellaneous collection brought together under the head of General Education, in which a great proportion of the Library is placed, and beyond, in the last recess and the space in front of it, are placed the models and examples of school-buildings and fittings, including patterns of the fittings sanctioned by the Committee of Council, and a model (the most complete in the collection) of Lord Granville's schools at Shelton, Staffordshire.

The Educational Library numbers already about 5,000 volumes, which are distributed, in their several recesses, under the classified divisions. It contains the series of works published by the English book-trade, contributions from various schools and educational writers, and sets of works selected by continental nations for their governmental schools. Of these about 400 volumes are from France, about the same number from Germany, about half as many from Denmark and Holland, a few from Malta, about 100 published by the Egyptian government, and presented by it to the Commissioners for the Exhibition of 1851, and a considerable number from the New York Board of Education.

In a collection intended to embrace so large a subject many will think some of its contents out of place. But this, on the contrary, illustrates not only the importance of national instruction, but its great range. The Astronomer Royal's great model of the Transit Instrument at Greenwich, which was constructed under his superintendence for the Government, and exhibited in Paris in 1855, may well illustrate the extent of the science of astronomy, as contrasted with the elementary series exhibited under the division of Astronomy. Mr. Airy has kindly written the following account of the uses of the instrument, the finest in the world, for the information of visitors to this Museum:—

The transit circle is one of those instruments which is intended, not for gazing at the heavenly bodies, but for determining the apparent places of the sun, the moon, planets, comets, and moveable bodies generally, as well as the places of stars hitherto unregistered, among the principal fixed stars.

Its use will be best understood by considering what must be done with a common celestial globe to effect the same purpose. Suppose that the globe is "rectified" in the usual way, and suppose that any small star, whose position we desire to settle, is brought to the brazen meridian. By means of the figures upon the brazen meridian we see what is the "angular distance of the star from the celestial north pole," or what is the "angular distance of the star from the celestial equator" (called "declination"), or what is the "angular elevation of the star above the south horizon, when the star is passing the meridian." These, though they are different measures, all amount to the same thing, and any one of them will answer that part of our purpose. But they are not sufficient to settle the place of

the star, because they will apply equally well to *all* the stars which lie in that circle round the globe which passes under the same point of the brazen meridian when the globe is turned round. It will be necessary, therefore, to have means of determining *in what part of that circle* the star lies. This is done by the following process:—

The whole frame of the heavens appears to turn round us in twenty-four sidereal hours. Suppose that we turn the celestial globe in the same manner, and suppose that we note the time by a clock (showing sidereal time) when a principal fixed star passes under the brazen meridian, and that we also note the time when the small star in question passes under the brazen meridian, and suppose that we find that the small star passes later by one hour than the principal star; then we know that the globe must have been turned one twenty-fourth part of its whole revolution between the passage of the principal star and the passage of the small star in question. (And so we should have different proportions of a whole revolution, according to the different intervals between the times of passage of the two stars.) Then, to instruct another person to lay down the place of that star upon another globe, we should say, "Bring the principal star to the brazen meridian, then turn the globe one twenty-fourth round, then take that point of the brazen meridian whose angular distance from the celestial north pole is a certain number of degrees: under that point is the place of the star in question."

Now the movement of the telescope of the transit circle corresponds exactly to the brazen meridian. The tube of the telescope is very strong, and very firmly connected with its axis; and the pivots of this axis turn in solid bearings within two massive stone piers; and therefore the telescope cannot be turned in all directions, but can be turned round its axis; and, as the axis is made truly horizontal, and placed truly East-and-West, the success of the telescope corresponds exactly with the line of the brazen meridian of the globe. So that, if an observer applies his eye to the eye-end of the telescope, and turns it to different positions, he can see the different stars which lie at one time under the length of the brazen meridian of the globe.

The instrument must be used in conjunction with a clock, exactly in the same way which has been described for the globe. The observer must apply his eye to the eye-end of the telescope, and must note the clock-time when a principal star passes; and must in a similar manner note the clock-time when the small star (or moon, or planet, or whatever it may be) passes; and the difference between these times tells how much the heavens have revolved between their two passages of the meridian. There are various contrivances of wires visible in the inside of the telescope, which tend greatly to increase the accuracy of the determination, but which it is difficult to explain, except to a person who has had some practice in observation.

Still, to complete the resemblance of the two methods, it is necessary to show how the instrument can give the same measure of degrees of "angular distance from the north pole." The circle which answers this purpose in the transit circle is not fixed (as the brazen meridian), but is attached to the telescope, and turns with it; and its graduations are viewed through holes which are pierced through one of the stone piers. In this manner it gives exactly the same information as to the angular distance of the star from the celestial north pole [or rather of the angular distance of the position of the telescope when pointed at the star, from the position when it points to the celestial pole; which amounts to the same thing] which is given by the brazen meridian of the globe. There are various contrivances of microscopes, wires moved by screws (called *micrometers*), troughs of quicksilver, &c., whose utility cannot well be explained in a popular account.

There are likewise two telescopes on detached piers, called "collinators," of which the use cannot well be explained here. But all these are described in the detailed account which is fixed to the pier.

The principles of observation explained above have long been known to astronomers, and have been employed for many years in the fundamental observations of most observatories. The chief merit of the Greenwich transit circle is, that it is able to carry an object-glass of larger diameter than has hitherto been mounted in meridional instruments, and that it gives great facility for examination of its defects and its errors of position. In its optical power, its accuracy, and its convenience for observation, it has no equal in Europe.

THE COMMISSIONERS OF PATENTS' MUSEUM.

This Museum, the southernmost in the ground floor of the Iron Building, consists of a selection from the models in the possession of the Commissioners of Patents, with the addition of others from various contributors, ranging from the year 1787 to the present day, and a complete set of their publications, consisting of several hundred volumes of specimens and drawings of specifications of patents from 1617 to the most recent filed under the new law.

The aim of the Commissioners in forming this Museum has been, in the first place, to exhibit and illustrate the progress of inventions, such as that of the steam-engine, which may be available for the use of the mechanician and for the instruction of the public; and in the second, to open a library of all the specifications of patents since the first entered in 1617, which as being commodiously situate, and well illustrated by the models exhibited, may leave all who desire information on this important subject nothing to desire.

The illustrations of the progress of the steam-engine, already adverted to, are the most complete, as they are the most important of the inventions here illustrated. In the centre of the open part of the collection, stands Symington's engine, constructed in 1788. In that year, the engine, mounted in a frame, was placed upon the deck of a double pleasure boat, 25 feet long and 7 feet broad, and connected with two paddle-wheels, one forward and the other abaft the engine, in the space between the two hulls of the double boat, propelled the vessel along Dalswinton Lake at the rate of 5 miles an hour. It is of the class known in the early history of steam machinery as the "atmospheric engine," in

which the piston is raised by the action of steam, and then on a vacuum being produced beneath, by the condensation of the steam, it is forced down again by the pressure of the atmosphere. Before that time, numerous projects had been proposed and a few abortive attempts had been made to propel vessels of steam power, commencing with an experiment said to have been made in the year 1543; but the whole of the projects and experiments previously to the application of this engine had proved valueless for any practical use. The result of the experiments with this engine and with a larger one subsequently made on the same plan, demonstrated to Symington that a more simple arrangement of the parts forming a steam-engine was required before steam power could be applied practically to navigation; and in 1801 Symington being employed by Lord Dundas to construct a steam-boat, availed himself of the great improvements recently made in the steam-engine by Watt and others, and constructed an improved engine in combination with a boat and paddle-wheel, on the plan which is now generally adopted. This boat, called the "Charlotte Dundas," was the first practical steam-boat.

It is curious to compare this engine with the paddle-wheel engines of the "Great Eastern," of which a beautiful model, No. 12, is exhibited. The illustrations of steam navigation embrace also a model of a vessel fitted with a screw-propeller, by T. P. Smith (No. 44), the practical inventor of the screw; a very early screw-propeller (No. 43); a pair of direct-action marine engines (No. 39); four varying-pitch screws by Mr. Bennett Woodcroft (Nos. 36, 37, 38, and 39); an increasing-pitch screw by the same, and some half-dozen models of engines by Bodmer.

Among the miscellaneous models, we may particularize an excellent model of a conical flour-mill, exhibited by H.R.H. Prince Albert (No. 19); a good model of a machine for forging, drawing, &c., spindles, rollers, &c. (No. 29); and a very interesting one of a paper-making machine, from the pulp vats to the reels on which the finished paper is rolled.

Each model is labelled with a short account of its construction and patentee; and portraits of eminent engineers and mechanists, principally patentees, are hung on the walls.

THE ARCHITECTURAL MUSEUM.

The Architectural Museum was founded in the year 1851, in Cannon Row, Westminster, as the nucleus of a NATIONAL MUSEUM OF ARCHITECTURAL SCIENCE AND ART.

The whole of the Collection was removed to the South Kensington Museum in March and April, 1857, where it now occupies the West Gallery of the Iron Building.

The objects of the Museum are to afford to the Public, Artists, Architects, and Artist-workmen the means of referring to and studying the Architectural Art of all Countries and Times. Its direct object is to improve and perfect the *art workmanship* of the present time.

To effect this, a large and increasing collection of casts and specimens has been already formed from the finest ancient examples, English and foreign, of complete architectural works, arranged, as far as possible, in the order of their date; and of details, comprehending Figures, Animals, and Foliage; Mouldings, Encaustic Tiles, Mural Paintings, Roof Ornaments, Rubbings of Sepulchral Brasses, Stained Glass, Impressions from Seals, and of all other objects of Fine Art connected with Architecture. The whole range of Gothic Art from those countries where it has been practised is more or less represented by casts and specimens. Arrangements are also now being made for the complete classification in the new Museum, in the order of their countries and dates, of the casts and specimens of the architectures of the Oriental, Classical, and other styles, of which there are now a number of fine examples in the Museum. A collection of casts from Natural Foliage &c. is in course of formation, to afford opportunities for the study of the ornamental art of past ages side by side with Nature. To casts and specimens are added, as opportunities offer, Photographs, Drawings, and Engravings of Architectural Works; the photograph or engraving giving a view of the whole structure, the casts giving the detail. To these have been added Models of Buildings. The various collections now number upwards of 7000 specimens.

Courses of Lectures will be delivered during the Sessions, in the Galleries of the Museum, and in the Lecture-room attached. Architects and Amateurs are solicited to aid in the delivery of Lectures, especially to Artist-workmen.

Prizes for the most meritorious specimens of Stone and Wood Carving, Metal Work, Decorative Painting, &c., are annually offered with the view to encourage and individualize the Artist-workmen of the day.

As a means of extending the usefulness of the Institution, Honorary Local Secretaries are being appointed in the more important towns in the kingdom.

Before detailing the principal objects in the Gallery, it may be useful to give the eras of English and French Gothic.

English Romanesque	•	•	•	1066	to	1189
Early English Gothic	•	•	•	1189		1272
Middle English Gothic	•	•	•	1272		1377
Late English Gothic	•	•	•	1377		1546
French Romanesque	•	•	•	circū 950 to c.		1050
French Transition	•	•	•	1050		1150
Early French Gothic	•	•	•	1150		1250
Middle, or Secondary, French Gothic	•	•	•	1250		1400
Late French Gothic, or Flamboyant	•	•	•	1400		1550

The specimens are described in the following Synopsis in the order in which they are seen by a visitor entering the Gallery by the south-west staircase, walking down the centre avenue of the Museum, and then re-

turning to the head of the stairs, and going round the side-avenues from left to right.

The Egyptian, Greek, and Roman examples of Architecture, are for the present arranged in the room at the foot of the staircase leading to the gallery of Gothic Architecture, and consist chiefly of examples from the Parthenon, and Temple of Jupiter Tonans, Rome.

STAIRCASE.

Foot of South-West Staircase.

Three Statues of Royal Saints, from Westminster Hall.

Head of Staircase.

1 Window, from a Church in York.

To the right of Staircase.

2 Doorway, from Barfreston Church, Kent.

GALLERY.

Centre Avenue.

3 Font, from Winchester Cathedral.
Font, from East Meon Church.

Screens (A A).

4, 4 The Lower Portions of the North-east Doorway of the Cathedral of Notre Dame, Paris.

5 Three Panels from the "Sepulchre," Lincoln Cathedral.

6 Fragment of a Column in Purbeck Marble, from the Chapter House, Salisbury.

7 Effigy of King Edward III., from Westminster Abbey.

8 Column from the South Transept, Westminster Abbey.

9 Effigy of King Henry III., from Westminster Abbey.

10 A Fragment of a Font.

Screen (B).

11 A Bay from the Sanctuary of the Cathedral of Notre Dame, Paris.
12, 12 On either side, two Figures of Apostles, from the Sainte Chapelle, Paris, and details from the same Chapel.

13 Effigy of Queen Eleanor, from Westminster Abbey.

The Glass Case contains Casts from Stone, Wood, Metal-work, Ivory, &c., not yet arranged.

Table (A).

On this Table are Models of Windsor Castle, and the Castle of Saxe Coburg Gotha, exhibited by Her Majesty.

Screen (C).

14 Two Canopies, from the Stalls of St. Mary's Church, Lancaster, originally in a Church in France.

15 A Bay from the High Altar Screen, Winchester Cathedral.

16 A Figure of the Virgin, from the Cathedral of Notre Dame, Paris.

17 A Series of four Bosses, from the Church of St. Mary's, Lancaster.

18 The Effigies of King Richard the Second and his Queen, from Westminster Abbey.

19 The Effigies on an Altar Tomb, of Talbot, Earl of Shrewsbury, his Son, and Wife.

20 Monumental Slab from Bredon Church.

Screen (D).

Three Panels from the Gates of the Baptistry, Florence, by Lorenzo Ghiberti, with portions of the Architrave, &c.

On this Screen, also, are a series of Casts from Natural Leaves.

The smaller Panels are the Competition Panels, by Lorenzo Ghiberti and Jacopo della Quercia of Siena, for the Gates of the Baptistry, and—

Four Panels from the Gates of the Baptistry, Florence, by Andrea Pisano, representing the Life of John the Baptist.

21 Panel representing the Creation of Adam and Eve—the Eating of the Forbidden Fruit—and the Expulsion from Paradise.

22 Panel representing the Visitation of the Three Angels to Abraham in the Valley of Mamre—the Sacrifice of Isaac.

23 Panel representing Noah leaving the Ark with his Family—Offering a Sacrifice—Planting the Vine—his Drunkenness—his Cursing Ham—and Blessing Shem and Japhet.

The above are 3 of the 10 panels in bronze of the third door in the Baptistry at Florence, executed by Lorenzo Ghiberti, which took the place of the first by Andrea Pisano at the principal or central entrance, that by Pisano being moved to a side entrance. A cast of these gates entire is placed at the north end of the building beyond the Sculpture Gallery.

24 Panel from the Architrave round the Doorway.

The architrave, also in bronze, is enriched with festoons of fruit and flowers, with birds and animals. According to the ancient register of expenditure, this door was commenced in the year 1424, and completed on the 11th of February, 1456.

25 Panel representing the Birth of John the Baptist.

26 Panel representing the Burial of John the Baptist.

27 Panel representing an Emblematical Figure of Faith.

28 Panel representing an Emblematical Figure of Hope.

These four bas-reliefs are from the south door of the Baptistry of Florence, cast in bronze (according to the inscription on the door) by Andrea Pisano, from a design by Giotto, in the year 1330. This door was completed in 8 years; it was originally placed in the central doorway of the church and there remained, until Lorenzo Ghiberti executed that which is now in its place.

29 The Competition Panel by Lorenzo Ghiberti, for the New Testament Gates of the Baptistry at Florence.

30 The Competition Panel by Jacopo della Quercia of Siena, for the same Gates.

The number of competitors for this work was seven, three Florentines and four Tuscans. Each artist received a sum of money, and it was commanded of that within a year each should produce a story in bronze, as a specimen of his powers, all to be of the same size. The candidates for this work were Filippo di Ser Brunellesco, Donato, and Lorenzo di Bartoluccio, who were Florentines, with Jacopo della Quercia of Siena; Niccolò d'Azeglio, his disciple; Francesco di Valdrambino, and Simone da Colle. Lorenzo Ghiberti, whose work was unanimously pronounced the best, at that time was scarcely twenty years old. He was born in the year 1381, and died in 1455.

Screen (E).

31 In front of this Screen is the Statue of Moses by Michael Angelo.

Screen (F).—East Side of Room.

Four Panels from the Gates of the Baptistry, Florence, by Lorenzo Ghiberti.

32 Panel representing the Betrayal of Christ.

33 Panel representing the Crucifixion with the Virgin Mary and St. John the Evangelist at the Foot of the Cross.

34 Panel representing St. Mark writing his Gospel.

35 Panel

Head from the Framework of the Door.

The number of stories on these doors is twenty, and the arrangement is similar to that adapted by Andrea Pisano in the construction of the first door in 1330, designed by Giotto; the subjects are taken from the New Testament, and thus the name New Testament Gates, by which they are distinguished from those previously executed by Pisano, and those subsequently by Ghiberti himself. Beneath these stories, in eight similar compartments, are figures of the four Evangelists with the four Doctors of the church. The framework enclosing each picture is enriched with foliage, and on each angle is a male or female head in full relief, purporting to represent the Prophets and Sibyls.

On this Screen are a series of modern carvings on stone, the results of Prizes annually offered by the Committee of the Architectural Museum to Artist-workmen.

On this Screen are also a series of Casts from Natural Leaves.

36 A portion of the Effigy of a Bishop from the Cathedral, Gloucester.

36a Column from St. Alban's Abbey Church.

37 Font from Patrickton Church, Yorkshire.

38, 39 Part of the Effigy of King Edward the Second, Gloucester Cathedral, and the Canopy from a Monument.

Screen (G).

40 Finial from Bolton Abbey.

41 Canopy from the Monument of Bishop Acquabianca, Hereford Cathedral.

42 Canopy from the High Altar Screen, St. Alban's Abbey Church.

43 Statue of King Edward I., from the South Porch, Lincoln Cathedral.

44, 44 Two Canopies and Pedestals from places not known, and some other details.

Table (B).

A Series of Models of Cathedrals, Churches, Fonts, &c.

Table (C).

A Series of the Royal Seals of England, from William I. to William IV., and a Series of Seals from Cathedrals, Monasteries, &c.; also a Series of original Drawings by Owen Jones, of Gothic Ornament.

45 The Effigy of King John.

Screen (H).

Three Panels from the Cathedral of Notre Dame, Paris, representing—

46 The Death of the Virgin.

47 The Burial of the Virgin.

48 The Assumption of the Blessed Virgin.

49, 49 Two Figures from the Chapter House, Westminster.

50, 50 Two Figures from Chartres Cathedral.

51 Foliage from Notre Dame, Paris.

52 Effigy of Bishop Acquabianca, from Hereford Cathedral.

53 Canopy from Notre Dame, Paris.

54 Altar Tomb and Effigy from Chichester Cathedral.

55 The Pier and Portion of the Arch from the Crypt, Ely Cathedral.

56 Effigy of a Bishop, name unknown, from Hereford Cathedral.

57 Head of Christ from Notre Dame, Paris.

West Wall of Gallery.

58 A Series of Panels from various places not known. (Elizabethan.)

French Romanesque.

59 A Series of Details from various Cathedrals and Churches in France. The Capitals on the Upper Shelf are from the Cloisters of the Abbey of Moissac, in the south of France.

French Gothic.

60 The Capitals on the Shelf are from the Cathedral of Notre Dame, Paris, and the Sainte Chapelle, Paris.

The Series of Details on the Wall are from the Cathedrals of Notre Dame, Paris, of Chartres, Rouen, Amiens, Bourges, and the Sainte Chapelle, Paris, &c.

61 On the opposite Wall are also a Series of Details from various Cathedrals and Churches in France, together with some from Germany. The Series of Panels are from Rouen Cathedral. The Series of Figures on the Upper Shelf are from the Shrine of St. Sebald, Nuremberg.

ENGLISH-ROMANESQUE (OR NORMAN), AND THE TRANSITIONAL STYLE.

ANGLO-ROMANESQUE, or NORMAN.—The general style of the 12th Century; it lasted about 124 years, from c. 1066, William I., to c. 1189, Henry II.; viz., during the reigns of William I., 1066; William II., 1087; Henry I., 1100; Stephen, 1135; Henry II., 1154 to 1189. The latter portion of the reign of king Henry II. and the reign of Richard I. formed the period of the Transition from the Norman, or Anglo-Romanesque, to the Early English Gothic, or First-Pointed.

"The Norman style is readily distinguished from the styles which succeeded to it by its general massive character, round-headed doors and windows, and low central square towers. The earlier specimens of Norman work are remarkably plain. In the chapel in the White Tower, the oldest part of the Tower of London and one of the earliest authenticated specimens of Norman work in this country, the arches are plain, square-edged, and entirely without ornament; most of the capitals are plain cushion capitals, but three of them are ornamented; one has the star moulding on the abacus, and a small cable moulding under it; the bases are well formed in imitation of Roman; the masonry is wide jointed, but the workmanship is not rude. At a later period, towards the middle of the 12th century, fine jointed masonry began to appear, and ornaments were more abundantly employed and generally executed with more skill; the doorways are generally very richly ornamented and of great depth, as at Ifley Church; the windows are of similar character, but smaller, and not usually so rich in ornament, and these are very frequently altered or removed to make way for windows of a later style, while the original doorway is generally suffered to remain. Circular windows are sometimes used; the arches are generally semicircular, but in the later specimens obtusely pointed. In the later period of this style, or period of transition, which lasted through a part of the 12th century, and the earlier portion of the 13th, both round and pointed arches frequently occur in the same building; and it is observed by Mr. Rickman, that 'it appears as if the round and pointed arches were, for nearly a century, used indiscriminately, as was most consonant to the necessities of the work, or the builder's ideas.' The Norman steeple is almost invariably a massive tower, seldom more than a square in height above the roof of the Church, frequently ornamented by intersecting arches, and supported by flat buttresses; it is usually placed in the centre of the Church at the intersection of the transepts, when the plan is cruciform, and this ground plan is much the most frequent in Normandy. The west end of Norman

Churches is frequently richly ornamented with deeply-recessed arches to the doors and windows, with their appropriate mouldings, and the surface of the wall covered by shallow arcades, the arches of which sometimes intersect one another, so as to form perfect pointed arches. It is often convenient to distinguish the styles by dates, in connection with the reigning sovereigns: thus the Norman style may be considered as terminating with the death of Henry II., in 1189, reckoning the reigns of Richard Cœur de Lion and John as the period of Transition, and commencing the Early English style with the reign of Henry III., in 1216."—*From the Glossary.*

English-Romanesque.

62 The Examples of the English-Romanesque are chiefly from the Cathedral Churches of Ely, Rochester, and Durham, from Adel Church, Yorkshire, from Worksop Priory Church, Nottingham, Haughmont Abbey Church, Dunstable Priory Church, Exton Church, Rutland, and St. Albans Abbey Church. 12th Cent.

63 On the opposite Wall are a Series of Capitals from Lincoln Cathedral, and from the Crypt of St. Stephen's Chapel, Westminster. Also a Series of Details from Westminster Abbey, and from the Chapter House, Westminster. The Series of 18 circular Panels on the Lower Shelf are from the Windows of the North Transept of Westminster Abbey. 13th Cent.

EARLY ENGLISH GOTHIC.

The general style of the 13th Century; it lasted about a hundred years, from c. 1189 to c. 1272, including the reigns of Richard I., 1189; John, 1199; Henry III., 1216-1272.

"The base consists of a hollow between two rounds with fillets, with a very marked horizontal spread of the lower part; the capital is no longer as in the Norman, a carved and sculptured mass with a thick square abacus above, but is a graceful bell with foliage tending upwards and curling in an extremely free and elegant manner; the abacus becomes round with a characteristic profile, and thus loses that appearance of a termination to the vertical members which it had before exhibited. The mouldings of the arch consist of rounds and deep hollows producing very strong lines of shadow, and have a continuous and carefully marked section. These bases, capitals, mouldings, sections of piers, of window sides, of strings, and other similar features, are quite as constant in their recurrence as the pointed arch, and much more characteristic, and no view of the formation of the Gothic style at all touches the really important part of the subject, which does not take account of these circumstances."—*From the Glossary.*

Early English Gothic.

The Capitals on the Upper Shelf are chiefly from the Chapter House, Westminster, St. Albans Abbey Church, the Cathedral, Llandaff, the Chapter House, Salisbury, and from various places not known. On the Wall is a Series of Details from Westminster Abbey, St. Albans Abbey Church, Llandaff Cathedral, Wells Cathedral, Salisbury Cathedral, the Chapter House, Salisbury, Lincoln Cathedral, and other places not known. The Series of Thirteen Spandrels, numbered 1 to 13, are from the Triforium, Lincoln Cathedral; the Spandrel with Capital is from Stone Church, Kent; the large Series of Cusped terminations are from Lincoln Cathedral; and the large Series of Corbel Heads from the Chapter House, Salisbury.

MIDDLE ENGLISH GOTHIC,

Called the DECORATED GOTHIC by Rickman; called MIDDLE-POINTED by the Ecclesiastical Society, and by Sharpe GEOMETRICAL and CURVILINEAR.

The General Style of the 14th Century. It lasted about a hundred years, from c. 1272 to c. 1377, including the reigns of Edward I., 1272; Edward II., 1307; Edward III., 1327-1377.

The Transition from the Early or Geometrical Decorated to the Flowing Decorated took place during the reign of Edward I.; the Transition from the latter to the Perpendicular during the reign of Edward III.

"The Decorated Style is characterized with us by its window-tracery, geometrical in the early instances, flowing in the later; but also and perhaps better by its triangular canopies crocketed and finialled, its niched buttresses with triangular heads; its peculiar mouldings, no longer a collection of equal rounds, with hollows like the Early English, but an assemblage of various members, some broad, some narrow, beautifully grouped and proportioned. Among these mouldings, one is often found consisting of a roll with an edge, which separates it into two parts, the roll on one side, the edge being part of a thinner cylinder and withdrawn a little within the other. A capital with crumpled leaves, a peculiar base and pedestal also belong to this style."—*From the Glossary.*

Middle English Gothic. West Wall of Gallery.

64 The Middle English Gothic, or Decorated Capitals, on the Upper Shelf, are from the Cloisters, Lincoln Cathedral, from the Chapter House, Ely, and from Wells Cathedral. The Details on the Wall are from the Chapel of St. Etheldreda, Ely Place, Holborn, from the Memorial Cross, Waltham, erected in memory of Queen Eleanor, from Lincoln Cathedral, Hereford Cathedral, Canterbury Cathedral, Beverley Cathedral, and from various Cathedrals and Churches and places not known.

65 On the opposite Wall are a Series of Capitals from Southwell Minster. The Details are also from Southwell Minster and from Ely Cathedral. The large Series of Misericores are from Lincoln Cathedral. The Pateras are from St. Stephen's Chapel, Westminster. 14th Cent.

LATE ENGLISH GOTHIC,

Called the PERPENDICULAR GOTHIC by Rickman, THIRD-POINTED by the Ecclesiastical Society, and RECTILINEAR by Sharpe.

The General Style of the 15th Century prevailed about 169 years, from c. 1377, in the reign of Richard II., to c. 1546, in the reign of Henry VIII., including the reigns of Richard II., 1377; Henry IV., 1399; Henry V., 1413; Henry VI., 1422; Edward IV., 1461; Edward V., 1483; Richard III., 1483; Henry VII., 1485; Henry VIII., 1509-1546.

In the latter part of the reign of Edward III., the Transition from the Decorated to the Perpendicular Style began, and was almost completed by the time of the accession of Richard II.

"Windows afford the most striking character of this style, and the eye at once distinguishes it from any other by observing that the mullions are continued through the head of the window, and that perpendicular lines prevail throughout all the tracery. The windows in the early and better part of this

style are large and lofty, divided by horizontal transoms into two or three parts. The windows of William of Wykeham have a peculiarly elegant character, distinct from any others, being generally very lofty in proportion to their breadth, with a well-proportioned arch: they belong to the earliest period of Perpendicular work. The windows of this style soon became more broad, less lofty, and the arch more and more depressed, until the style became quite debased and the square-headed window prevailed almost universally. The four-centred arch is generally characteristic of this style, and in the latter period of it almost universal but not invariable, as amongst the ornamental parts of niches, &c., arches of almost every form may be found. An ogee arch is not unfrequently used in late Perpendicular work, but principally for the heads of small doorways, &c. The doorways of this style have usually a square head over the arch and the spandrel generally filled with some ornament in the interiors. An ogee canopy is sometimes used instead of the square head, or the panelling, which forms one of the most striking marks of this style, is continued quite to the arch. The whole surface of the walls, both within and without, is sometimes covered with panelling, which produces a rich and exuberant but somewhat frittered and tawdry effect. Domical roofs to the turrets are also characteristic of this style, as at King's College Chapel. Another ornament peculiar to this style is the figure of an Angel with expanded wings supporting a shield, or as a corbel, or a row of them in a cornice. The rose and portcullis of Henry VII. also very frequently occur. The ornament called the Tudor flower, resembling an oak or strawberry leaf, is also frequently found as a finish to the cornice of rich screen work, or over niches, &c., as in St. Mary's, Oxford."—*From the Glossary.*

Late English Gothic.

66 The Late English Gothic, or Perpendicular Capitals and Details on the Wall, are chiefly from the Collection of Casts at Banksy, obtained by Sir C. Barry as models for the use of the workmen at the Houses of Parliament. The Panels are from wood examples. The other Details are chiefly from Henry the Seventh's Chapel, St. George's Chapel, Windsor, St. Mary's Stralton Church, Norfolk, Worsted Church, Norfolk, Kinton Church, Devon, Wells Cathedral, and from other places not known.

67 On the opposite Wall are a Series of Details from the same places.

On the sides of the Screens facing the Walls are also a Series of Details from the same places and from others not known: they have been principally obtained from the Collection of the late Mr. Cottingham.

East Avenue of Gallery.

68 The Effigy of Hugh de Northwold, Bishop of Ely, from the Cathedral Church of Ely.

69 The Effigy of St. Simeon, from the Church of St. Simeon, Venice.

70 Effigy of the Boy Bishop, from Salisbury Cathedral.

71 Fragment of a Stone Coffin Lid.

South Gallery.—Venetian, Romanesque, and Venetian Gothic.

72, 73 The Capitals on the Shelf are from the Doge's Palace, Venice, and from the Church of St. Mark's. The whole of the Details on the Wall are from the same Palace and Church, and from other Churches and Palaces in Venice, Verona, &c.

74 The Arch on the East Wall is from a Mural Monument in Verona. The whole of this Collection of Venetian Work has been presented to the Architectural Museum by J. Ruskin.

75 The French Capitals on the North Wall are from Notre Dame, Paris, and the Details on the Wall are from the Cathedral, Chartres. From the Ceiling of the Gallery are suspended a Series of rubbings of Brasses not yet catalogued.

For a List of the Donors of Specimens to the Museum, see the Report for 1857, to be had on application to the attendant.

* * * A complete detailed Catalogue of the whole of the Collection is in course of formation, and will shortly be published. The present Synopsis is for the use of visitors till the more complete Catalogue can be prepared.

SCULPTURE OF THE UNITED KINGDOM.

WHEN the Committee of Council on Education took possession of the Museum Building, an application was made by the Sculptors' Institute for a certain space to be set apart for the formation of a collection of Sculpture of the United Kingdom. This proposition having been approved, a committee was appointed to carry it into effect, and the statues and groups now collected in the West Gallery, at the entrance of the Sheepshanks' Gallery of Pictures, show the success that has attended their efforts.

It is not intended to confine this exhibition to the works of living artists, but to admit those of deceased sculptors as well, in the hope that eventually it will be possible to present, in the South Kensington Museum, a historic illustration of British sculpture.

One of the first regulations which it was thought essential to establish, was that this collection is not in any way to interfere, or be brought into competition, with the existing exhibitions which are held annually, either in the metropolis or in some of the larger provincial towns. All the works in the Gallery have, therefore, been already exhibited to the public in one of the exhibitions of the United Kingdom.

The exhibition is intended to be of a continuous character, but an annual revision of the works for rearrangement and change will take place. A work once admitted into the Gallery, with the approval of the Committee, must remain on exhibition for six months at least; but no work will be allowed to remain in the Building for more than three years; so that the public will constantly find the Gallery enriched by fresh contributions, sent by the sculptors to replace the works removed.

The number of sculptors who have responded to the invitation issued by the Committee is twenty-five, who have contributed altogether about fifty separate works. As each group and bust is labelled with its designation and the artist's name, it is unnecessary to give a list of them; but we may be permitted to call particular attention to the works contributed by such sculptors as Bailey, Bell, Foley, Munro, Calder Marshall, and the late Sir Richard Westmacott. Many of the other contributions have, however, their own peculiar excellence, and are well worthy of a place in a Gallery intended to illustrate the art of sculpture in the United Kingdom.

THE GALLERY OF BRITISH FINE ARTS.

THE Gallery of British Art is so entitled in compliance with the desire of Mr. Sheepshanks when laying the foundation of the collection.

His gift consists of 234 oil paintings, and a considerable number of sketches, drawings, and etchings, almost all the works of British artists; but it is not the donor's intention that it should be kept apart, or bear his name.

It is given for the purpose, as the primary object, of being used for reference and instruction in the Schools established in connection with the Department of Science and Art: this first object being secured, it is next open to the general public, as far as may be consistent with the fulfilment of the former and principal intention.

The pictures forming the collection range over a period of about 50 years, and it is not surpassed by any other as exemplifying the chief characteristics of British Art so far as they can be displayed in works of cabinet proportions.

The more imposing subjects fitted to decorate great public buildings are, of course, not represented here, though interesting first thoughts and studies for some of them are to be seen among the drawings; but in their stead are illustrations of our national poets, episodes of our domestic life, and the scenery of our native country; and not a few of these serve to exemplify the truth that genius, despite the universality of its range, derives its happiest inspirations from the home where it has been nurtured.

The peculiar interest which this collection is calculated to excite is due, therefore, not alone to its appeal to that sense of the beautiful which many possess, or to that social instinct which makes us love the delineations of human life, but also to our *home* feeling—our peculiarly national characteristic. We proceed to notice the principal works, taking the names of the respective artists in alphabetical order.*

Room 1. No. 6 is a landscape with cattle, by John Burnet. Painted in 1817. **2.** Nos. 8 to 15 are by Sir A. W. Calcott, and some of them exhibit skill in composition, but, perhaps, less love of nature than of art. His version of Falstaff sending his jesting message to Master Slender (exhibited in 1835) is amusing.

1. Nos. 17 and 18 are by Mrs. Carpenter; the first was painted in 1821, but has recently been in the hands of the artist.

1-2. G. Clint's pictures, Nos. 20, 21, 22, 23, are portraits in theatrical character—a branch of his art as a portrait painter to which he devoted himself: the figure of Liston as *Paul Pry* is a characteristic likeness. (Exhibited in 1831.) Clint was originally a house painter, which explains, perhaps, a certain coarseness of execution he never conquered.

1. Ten works by Collins, Nos. 24 to 32, are in the collection, of very different degrees of merit: that entitled *Rustic Civility* has a freshness and truth of expression which renders it attractive. The natural attitude of the boy pushing back the gate while he touches his sun-burnt hair with his hand, and the half-shy glance of the little one behind its bars, are well expressed. In No. 31, *Seaford, Coast of Sussex*, we find similar qualities of expression; the little girl's absorbed and admiring attention to the superior skill of the young boat-builder, and the half-criticising indolence of the boy stretched on the warm sand before him, while beyond, the shadows of summer clouds chase each other over the far expanse of curving shore. For the figures in this picture an interesting pencil study will be found among the drawings (No. 10).—Between this work and the little *Interior*, No. 32, there is an interval of thirty years, the latter painted in 1814, the former in 1844: it is interesting to note the change of the painter's manner.

The Stray Kitten is the title of No. 29, and needs no interpretation. The artist's attention to minute truth of action is well seen here, notwithstanding inaccuracy in drawing and peculiarity of execution. The milk-pan has but just been put down, for the milk is still rising against the rim and spilling over; the suppressed eagerness and childish excitement of the whole group is very lifelike.

4. Constable is well represented by his large picture, No. 33, *A View of Salisbury Cathedral from the Bishop's Grounds*, an unique example in England of a symmetrical Gothic cathedral, in whose construction one plan has been followed out. The painter's peculiar handling is here effective, without degenerating into artistic pedantry; the sky especially is truthful, and the freshness of nature well rendered. It was painted in 1823, but a trivial fault was found with it by the Bishop, for whom it was executed, and he declined taking it. Nos. 34 to 38 are also from his pencil. No. 35 is, in many respects, admirable; and the last, in particular, shows how fully he knew that the only school of art was that kept by Nature.

Nos. 39 to 49 are by E. W. Cooke, A.R.A., several of them worked out with the extreme accuracy and care which characterize his paintings.

3. Nos. 52 to 60 are by C. W. Cope, R.A. The first expressively portrays the palpitating anxiety with which a young girl waits, while an ancient dame and the postman deliberately discuss the address of a letter in a handwriting which her heart has read faster than her eyes. "The Hawthorn Bush, with seats beneath the shade," &c., from Goldsmith's *Deserted Village*, is the subject of No. 54. Nos. 53 and 60, *The Young Mother and Mother and Child*, are home scenes; and among the chalk drawings may be seen the sketch of the same little living model, which the artist, like Albano, doubtless found very useful.

No. 61, *Scene from the Tunnel*, and 62, *Summer's Afternoon*, are by Thos. Creswick, R.A., both exhibited in 1844.

1. Nos. 65, 66, and 67, by F. Danby, A.R.A., are not favourable examples of his style. The first was painted in 1821.

* The Collection is contained in four rooms: the two larger 46 feet by 20 feet; the two smaller 34 feet by 20 feet; 22 feet high. Light is admitted through an aperture 10 feet wide along the roof, glazed externally with clear glass; a second glazing of ground glass being placed below. Gas is supplied by 112 burners in the larger, 84 in the smaller rooms. Apertures for the admission of fresh air, 45 square feet; escape of foul air, 40 square feet in each room. The building was erected from the designs of Captain Fowke, R.E.

Room 1. No. 69, the work of T. Duncan, A.R.A., is a touching illustration of the pathos that speaks in the words of the Ballad, "I wish I were dead, but I'm no like to die," "And why do I live to say, Wae's me?"

No. 70, by Sir Chas. L. Eastlake, is an incident from real life, and though a slight painting, is vividly told. 72 and 73 are by Etty.

Nos. 81, 82, and 83, by J. C. Horsley, A.R.A., are slight incidents made interesting by a certain quaintness as well as feeling which the artist has given them. The backgrounds of 82 and 83 are from Haddon Hall, Derbyshire; the latter from the bow-window in the Steward's parlour.

Two Portraits by Jackson, 84 and 85, are good examples of his manner. The former is broadly and effectively painted, but the flesh tints have not stood.

Nos. 87 to 102 are sixteen works by Sir E. Landseer, R.A., including some of those most known by engraving, and on which his reputation as an artist must greatly rest, with a few also of his early productions, as No. 92, painted in 1822, and No. 89, in 1826. No. 97 is the work of his childhood, when he was twelve years of age. *The Old Shepherd's Chief Mourner*, No. 93, is a picture the pathos of which has rarely been exceeded in animal painting. *Suspense*, No. 99, is also an example of his power of entwining human sympathies round the actions of animals. Who would not wish to know what is passing behind that door, whose opening is watched for with a look of interest so single and suspended? The daggled plume, and the red drops that have fallen heavily, one by one, like the first of a thunder shower, explain the faithful dog's dejection as he waits for tidings of his master. In the *Highland Drovers Departure*—the largest painting in the collection—the reading the many incidents brought within its compass will interest all who examine it with the attention it merits; and besides the power of expression evinced, the artistic skill displayed in several of the groups may repay minute scrutiny, even if the advantage of technical knowledge do not exist to draw admiration to the felicitous manner in which the painter's materials and tools have been handled.

No. 103, by Chas. Landseer, R.A., represents the passage in the life of Andrew Marvell when the Lord Treasurer Danby, knowing his poverty, offered him a present of 1000*l.*, hoping to secure his interest for Charles II's corrupt administration. But he explained to his Lordship that his wants were sufficiently provided for, the remains of yesterday's mutton being enough for dinner to-day.

The collection contains twenty-three works by C. R. Leslie, R.A., chiefly subjects from the dramatists or from popular writers. Among the former may be instanced the scene from *The Taming of the Shrew*, No. 109, where Petruchio is wroth with the tailor. The management is skilful, and passages of colour are rich. This is a repetition of the same subject in the Petworth collection: it was painted in 1832. The principal characters from *The Merry Wives of Windsor*, 110, and the three pictures, 118, 117, 118, of *Scenes from Molière* are of the same class. And though in parts very slightly painted, the artist's peculiar reading of each character is vividly brought out, and may aid others to enter into the meaning of the author as intensely as he himself has done.

Among the latter is *Uncle Toby and the Widow Wadman*, a picture well known through the popular engraving. There is also an expressive scene from *Gil Blas*. The little circular picture, No. 126, is a portrait of *Her Royal Highness the Princess Royal*, a study for that in "The Christening." No. 129 is a portrait of *Her Majesty in the Coronation Robes*, and was esteemed a successful likeness.

The group of pictures, Nos. 138 to 162, to which we would next allude, consists of twenty-eight works by W. Mulready, R.A., painted during the last fifty years; and though varying widely, as may be expected, in treatment and in value, there are many over which we would gladly pause. We must content ourselves by merely indicating a few. The *Seven Ages*, No. 138, was originally designed for a wood-cut, and afterwards developed for Mr. Sheepshanks into the present elaborate and interesting picture. The painter's object has been to take passages of human life as they might be expected to occur; accumulating incident, indeed, but not rigidly adhering to his text. Thus the prisoners behind their bars are craving relief from the passer by, and let down a shoe to receive it; while through the arch is seen the contrast of a hawking party in all their unrestrained freedom. Each group evidences the skill of the artist; especially the figures carefully worked out and finished to the left, and on the opposite side, the decrepit old man affectionately tended and reverenced, though he can no longer regard it;—the feebleness of this last age brought into comparison with the rude strength of the muscular figure that has just been drawing his chair, and now pauses to refresh himself. It was exhibited in 1839. No. 139, *The Fight Interrupted*, (painted in 1815). 140, *Giving a Bite*—a boy affording a grudging share of his apple; 143, *Open your Mouth and shut your Eyes*; 147, *The Sailing Match*; 148, *The Butt*, where a boy waits to have cherries shot into his mouth, while his dog looks on with quaint intelligence—are all pictures that tell their own stories, and, in the class to which they belong, are not easily rivalled. As examples of artistic skill some of them, especially the last (painted in 1848), are altogether remarkable. The rendering of texture, without recourse to tricks of manipulation, has rarely been surpassed, whether in the soft skin of a little child, the materials of its clothing, or the rigid hair of the mongrel dog. 145, *Choosing the Wedding Gown*, an illustration of "The Vicar of Wakefield," will well repay careful perusal, and, for artists, is moreover a valuable study of colour and texture. This was painted for Mr. Sheepshanks in 1846.

No. 165, by G. S. Newton, R.A., representing *Bassanio receiving the news of Antonio's losses*, is rich in colour.

Nos. 167 to 172 are by R. Redgrave, R.A. In the first the artist has found his subject in the beautiful fairy tale of *Cinderella and the Glass Slipper*, and has not failed to see that its moral is not added on as a ponderous fringe, but woven like a thread of gold through the tissue of the story: thus it is through his picture, from the look of kindling love and assured hope with which the young prince bends over the slight figure of Cinderella, whose happiness now secure, to the mortified surprise of the ill-natured sisters. (Exhibited in 1842.) No. 168, entitled *The Governess*, has been many times repeated by the artist: this is the fourth painting of it. The principal figure wins from the gazer that sympathy which her

Room lonely sorrow has not found from those by whom her circumstances surrounded her. In *Ophelia twining her Garlands*, No. 171, the carefully expressed accessories are taken from a scene in Penshurst Park. Painted in 1842.

4 Nos. 174 to 176 by D. Roberts, R.A. *The Gate of Cairo*, called Bâb El-Mutawellee, although conventionally treated, is an effective representation of eastern architecture.

No. 177, called *The Little Roamer*—"her path 'mid flowers"—is sufficiently attractive from the graceful beauty of the child—untouched, however, by the sunbeams that must have expanded her flowers—to draw the thoughts away from the inaccuracy of some of its details. No. 178 is familiar to most from the engraving.

1-4 Nos. 185 to 187, by G. Smith, are carefully painted, and are not without a certain homely interest.

1 Stanfield is represented by Nos. 188 to 190. *A View near Cologne* (dated 1829), *A Market Boat on the Scheldt* (1826), and *Sands near Boulogne* (1838).

2 Stothard's works, Nos. 197 to 206, have the appearance of more than their real age. It may be interesting to the visitor to contrast his endeavour to realize Shakespeare's characters with those of other artists in the collection. The *Ophelia* is a graceful figure: this picture was painted in 1812. His illustrations of *Tam o' Shanter* and *John Gilpin* are quaint, and will be examined with interest.

4 J. M. W. Turner, R.A., five pictures. *Line Fishing off Hastings*, exhibited 1835; *Venice* (1840); *St. Michael's Mount* (1834); *Coves, with Royal Yacht Squadron* (1828); and *Vessel in distress off Yarmouth*, called "Blue Lights" (1831). It is matter of regret that, owing mainly to the artist's method of painting, and his habit of retouching on the walls of the Academy, the materials of his pictures have often failed, and convey an imperfect idea of their first effect. Yet the genius that was chief among painters to interpret to his fellow men the secret language of nature is present here, whether in the "countless smile" of a southern sea, or the restless heave of the coast tide, or the tumultuous gush of the billows, where human interest and human peril are added to the excitement of the scene.

1 Nos. 212 to 215 are by Thos. Uwins, R.A. The artist, as may be perceived, has worked much in Italy.

4 Thos. Webster, R.A., five pictures, Nos. 219 to 224. These happy illustrations of every-day life need little to guide the observer in reading their very obvious stories; they have a homely truth which appeals to all who peruse them. The Child astride on Grandpapa's Stick and Coaxing for a Fairing—the mischievous happiness of the return, when the purchases have been made, and a penny trumpet can be effectively applied to sister's ear—the grave little face and the pointing finger of the child reading the Bible, and the sense of duty in the old matron's somewhat stern brow;—in the *Contrary Winds*, the thorough earnestness of each young Eolus, and the contrast of puss and her placid doze. Such art has at least a secret of popularity, and young eyes will gaze long and earnestly and intelligently into these vivid though homely stories of English childhood. The critic, however, may be apt to observe how much the painter has yet to learn in the handling of his tools before he attains the skill of such work as we have seen in No. 145. Several studies for *The Village Choir*, No. 222, are among the chalk sketches.

2-1 Among the works, Nos. 225 to 231, chiefly slight sketches of Sir D. Wilkie, is one, however, *The Refusal*, No. 226, a very valuable production of the artist, and in its power of expression and earnestness both characteristic and successful. It illustrates Burns' ballad of *Duncan Gray*. Wilkie made, as was his habit, careful studies for it, and laboured much upon its details. The female figures were taken from his sister and mother.

DRAWINGS, ETCHINGS, &c.

3 In addition to the Sketches, Drawings, and Etchings already alluded to as forming part of Mr. Sheepshanks' gift, the collection contains others, obtained, some by purchase, some by presentation. The whole will be enumerated, and particulars given respecting them in the larger catalogue: here we have space merely to indicate a few.*

No. 1, a small work by Barret, is the earliest water-colour drawing in the collection, and has a sombre heaviness about it which contrasts disadvantageously with the crisp clearness attained by more modern draughtsmen.

No. 12, containing four small "blots" of effect, by Collins, may be instanced as showing a true feeling for and appreciation of colour, especially that marked 4.

Nos. 15 to 18 are studies by E. W. Cooke, chiefly of those sex-side scenes and objects which form materials for his pictures: two of these are developed into oil-paintings in the collection.

No. 19, one of several studies by C. W. Cope, R.A., is from life, representing a sleeping child: it is drawn in chalk, touched with vermillion, and was prepared by the artist for his picture of *The Mother and Child*, painted for the Marquis of Lansdowne.

Nos. 29 to 48 are a series of water-colour sketches in Portugal, by J. Holland; some of them, however slight, deriving interest from the localities they represent.

Nos. 48 to 58, a series, mounted in one frame, of the early attempts of Landseer, will be regarded with interest, as evidencing the boyish choice of that field of art in which we have already seen the success of his subsequent efforts.

Nos. 60 to 78 are by W. Mulready, R.A. A profitable lesson in art may be derived from the perusal of these—some of them very elaborate drawings and studies, by the same pencil whose finished works are well represented among the oil-paintings. Their chief characteristic is earnestness in attaining the most expressive or appropriate truth of whatever scene or object or action was before the artist's eye (for example, the pen-and-ink sketches of hands in No. 70); and, next to this, a singular command over his materials. The rounded firmness of the flesh in the large

* The whole collection is not exhibited at once: other drawings will take the place of some of those at present on the walls—the frames being arranged to afford facility for such changes.

life study, in coloured chalk, and the patient hatching in of the pen-and-ink sketches, may alike illustrate our observation. The results of this labour, as we have seen them in the collection of paintings, are sufficient to stimulate others to seize any hint let fall by one who was in the path to such excellence. Nos. 87 and 88, *Interior*, with *Portrait of Mr. Sheepshanks*, are apt illustrations of the earnestness with which the artist wrought out his intentions. No. 72, a chalk study of a girl and child shrinking up against the wall while the cannon is being fired, and the large drawing, crowded with life, for a picture of *Punch*, are well worthy of study. Others, as No. 86, find their realization in pictures at present in the collection.

This is also the case with the chalk study, No. 198, for R. Redgrave's picture of *The Governess*, though the pale material is inadequate to show the sunny light which the young girl's face gains in the oil-painting.

No. 98 is far the most important water-colour drawing in the collection. It is one of Turner's Yorkshire series, the scene being on the confines of that county, and the exceeding delicacy with which it is worked up, and the truth it attains, will repay the most minute and scrutinizing study. It is a lesson of labour; the consciousness of one who knew that the characters of nature were indeed legible, but not so plain that he might run who read them; who set himself to his work of pourtraying miles of vanishing distance on his little sheet of paper, with a sense, perhaps, of power, but with a laborious recognition of the infinitude of nature. No doubt he thought lightly of the result of all his toil; but we may be allowed to pause upon its tender lines, its transparent shadows, its gleams of light, and the boughs that wave with their delicate tracery against the glowing sky.

The chalk studies for Webster's *Village Choir*, Nos. 206 to 210, have been already alluded to. No. 93 is an expressive sketch by Wilkie, for the picture of *Peep of Day Boy*, in the Vernon collection.

There are also several works by Dyce, Herbert, &c.; a series of pencil sketches by J. Jackson, R.A.; a drawing by Stanfield (1838); several by Stothard; and a series of etchings, many most interesting and valuable, by Wilkie, given by Mr. Sheepshanks with a view to their use in extending the practice of etching by female students; others presented by the Etching Club.

On leaving the Gallery of Paintings the visitor should turn to the left, passing the full-sized cast of the Ghiberti Gates and complete model of St. Paul's Cathedral as it was first designed by Sir Christopher Wren. For a long period this model has remained in the Cathedral, in a situation where it was not open to the inspection of the public: it was given up to the Government for three years by the Dean and Chapter, who hoped that its resurrection and exhibition would be appreciated as instructive and interesting.

THE TRADE COLLECTION.

The Trade Collection occupies a large portion of the East Gallery of the Museum, and is the property of Her Majesty's Commissioners for the Exhibition of 1851.

During the Exhibition of 1851, a circular was addressed to the exhibitors of the United Kingdom, as well as to those of foreign countries and our colonies, pointing out to them the advantages of a systematic collection from different classes of objects which they respectively exhibited, and requesting their co-operation in forming such a collection. The object was to preserve a record of things in the Exhibition which might be of use for future consultation, and which in the form of actual specimens would be far more valuable than the most complete catalogue or the most careful diagrams. It was proposed to register the discoveries and uses of various materials. The collection was to serve as a means of reference for commercial, scientific, and artistic purposes; and would have enabled a strictly philosophical classification of the objects to be made, and rendered a comparison of them easy. The scheme appeared, however, to be so cordially approved, and the contributions from all directions were so numerous and liberal, that it was determined to extend the scope of the collection and give it a new direction. It was proposed to satisfy a great public want in the metropolis,—that of a trade collection of the imports and exports of the world, where men of business might be at liberty to examine and practically to test samples of the articles in which they traded, or respecting which they might require information.

The object of the Commissioners was, however, never destined to be fulfilled. They had indeed accomplished a most difficult portion of the undertaking—that of forming a nucleus for the collection—but other difficulties presented themselves and were not so easily overcome. They dared not solicit further contributions until the destination of the collection could be decided upon, as they were well aware that the majority of the articles composing it would be injured unless placed in a suitable building. For nearly six years, therefore, the collection has remained packed, in its original state, in the lower rooms of Kensington Palace, and is now at last arranged in the East Gallery of the South Kensington Museum. But the opportunity of completing the collection has been lost, and its destination has consequently been altered.

The whole collection is exhibited in the gallery, divided as near as possible into the thirty classes of the Exhibition of 1851, which it represents more or less perfectly. With the exception of one portion only—that of animal products—it is intended to distribute all the specimens among our national and provincial museums and to some of the learned societies, enabling them, in some instances, to complete their collections, and in others to make important additions to them. The Commissioners will thus confer a material benefit on the public, as they are themselves unable to make a separate exhibition of objects of too fragmentary a character to justify their retention as a distinct museum. It was, moreover, thought inexpedient to make an incomplete display of

objects fully represented and classified in other parts of the Museum, and therefore this distribution has already been effected to some extent by at once incorporating the property of the Commissioners with the Educational Museum, the Architectural Museum, and the Collection of patent inventions.

It will thus be seen that the General Trade Museum will eventually resolve itself into a collection of animal products and their appliances to industrial purposes. This is the only portion of the collection that can lay any claim to completeness, and for this the Commissioners are chiefly indebted to the Society of Arts and to Professor Solly. By the exertions of the latter in 1855, a most complete collection of animal products was formed and exhibited at the Society's House in the Adelphi. But the want of a suitable place in which to place it was soon felt, and it was handed over to the Commissioners and incorporated with their trade collection, in the hope that it might ultimately be well displayed. The want which has so long been felt of a museum representing the industrial applications of animal products, is now in a fair way of being supplied. Two of the great divisions into which raw materials are divided, are already represented in the metropolis: the Museum of Practical Geology in Jermyn-street represents the economic application of geology to the useful purposes of life: the Botanical Gardens at Kew represent the cultivation of vegetable products, and the illustration of their application to our wants: and now the collection of animal produce will be made a centre for the dissemination of technical knowledge on the subject, the importance of which can hardly be too highly rated.

ECONOMIC MUSEUM.

THOUGH the lessons of household and health economy intended to be taught by the Economic Museum may be useful to all classes of society, they are more particularly addressed to the working classes, being designed to impart to them, in an easy and agreeable manner, the knowledge of common things, and to show them how much it may promote the health, comfort, and happiness of themselves and their families.

Mr. Thomas Twining, jun., a gentleman well known for his philanthropy and efforts to improve the physical condition of the working classes, obtained, in 1850, the sanction of the Society of Arts, of which he is an active member, to the formation, under their superintendence, of collections of articles of domestic economy. With the approval and co-operation of the French and Belgian Governments, his collection, enlarged and amplified by numerous foreign contributions, was exhibited in the *Palais de l'Industrie* during the Paris Universal Exhibition of 1855, and in Brussels in September last.

When the Government took possession of the iron museum at South Kensington, Mr. Twining offered them the collection which he had formed at his own expense, and which was now enriched by donations that he had received from abroad. The offer was accepted, and the collection is now exhibited in accordance with the views which directed its formation.

The articles forming the Economic Museum are classified under the following heads:—

SOUTH KENSINGTON MUSEUM.—This Museum, containing Pictures, Sculpture, Architecture, Building Materials, Ornamental Art, Educational Collections, Patented Inventions, and Products of the Animal Kingdom, will be opened to the Public on Wednesday, the 24th of June, and continue open daily from Ten to Four.

For the instruction and recreation of persons working in the day-time, the Museum will be lighted up every Monday and Thursday Evening from Seven to Ten.

On Monday, Tuesday, and Saturday, Admission Free. On Wednesday, Thursday, and Friday, being Students' days, 6d. each person.

By Order of the Committee of Council on Education.

COMMITTEE OF COUNCIL ON EDUCATION, South Kensington, London, W.

I. To aid all classes of the public in carrying out the work of National Education, and especially those engaged in teaching, the Lords of the Committee on Education have arranged to establish at the new Buildings at South Kensington, a Museum which will exhibit, under a proper classification, all important books, diagrams, illustrations and apparatus connected with Education, already in use or which may be published from time to time, either at home or abroad.

II. It is proposed that the Museum shall be opened to the public this Spring. The public will be admitted free to the Museum as a public exhibition on certain days of the week; and on other days, which will be reserved for Students, opportunity will be given to examine and consult the objects.

III. The objects exhibited at Saint Martin's Hall in 1854, which were presented to the Society of Arts, and by that Society given to the Education Board in order to found a Museum, will form part of the Educational Museum. The producers of apparatus, books, diagrams, maps, &c., used in

Class I. BUILDING DESIGNS. Models, drawings, and plans, showing the exterior and interior arrangements of dwellings and buildings of every description, existing or proposed to be constructed for the use or benefit of the working classes.

II. MATERIALS for building and household purposes.

III. FITTINGS, FURNITURE, and HOUSEHOLD UTENSILS.

IV. FABRICS and CLOTHING.

V. FOOD, FUEL, and other HOUSEHOLD STORES.

VI. SANITARY DEPARTMENT.

VII. EDUCATIONAL DEPARTMENT.

VIII. MISCELLANEOUS ARTICLES not referable to the foregoing classes.

IX. THE ECONOMIC LIBRARY.

The special objects which have been held in view during the formation of the Economic Collection may be enumerated as follows, and will be seen to embrace everything that concerns the well-being of the working classes:—

I. To collect at home and obtain from abroad, and to exhibit with explanatory labels, in the manner most convenient for inspection, specimens of furniture, household utensils, clothing, food, and, in short, of every article or contrivance which, from its cheapness, combined with good quality, its convenience, its genuineness, or its conduciveness to health, may be deemed likely to promote the comfort of the working classes in Great Britain or the Colonies.

II. To display in series or groups all articles of common use; showing by instructional labels, diagrams, coloured drawings, &c., how they are obtained or prepared, imparting other elements of useful knowledge, and referring for fuller illustrations to such institutions as the Geological Museum in Jermyn-street, the Botanical Museum at Kew, or other sources of information which may be within reach.

III. To teach the working classes how to distinguish the relative qualities of the articles used by them, such as genuineness, wholesomeness, durability, &c., and consequent relative value; so that they may be guided to lay out their money to the best advantage, and be guarded against adulteration and fraud.

IV. To show by models, drawings, and working plans, accompanied with estimates, results, &c., how architects, builders, and benevolent capitalists may, with a prospect of a good return for their capital or their labour, raise improved habitations for the working classes in town or country, or renovate with advantage existing dwellings. Also, how the arrangements of benevolent establishments of every description may be economically improved.

V. To promote improved contrivances for ventilation, sewerage, and other sanitary purposes, cheap medical and surgical appliances, and means for preventing or alleviating the accidents, injuries, and diseases which attach to various industrial occupations.

VI. To collect in a library attached to the Museum publications and documents required for completing the information given on the labels, concerning the various articles displayed in the Museum; or which may be useful for reference to the working classes, as bearing on their household economy, their earnings and expenditure, their habits, wants, and resources; and likewise the laws which specially affect them and the institutions established for their benefit.

VII. To constitute the Economic Museum a medium for the interchange between Great Britain and other countries of inventions, contrivances, publications, and authentic information, bearing on the physical and intellectual improvement of the people.

teaching will have the privilege—subject to certain regulations—of placing their publications and productions in the Museum, and thus making them known to the public. A Catalogue will be prepared, which will contain the Price Lists which Exhibitors may furnish for insertion.

IV. The books and objects will be grouped under the following divisions:—

1. SCHOOL BUILDINGS and FITTINGS, Forms, Desks, Slates, Plans, Models, &c.

2. GENERAL EDUCATION, including Reading, Writing, Grammar, Arithmetic, Mathematics, Foreign Languages, and Histories.

3. DRAWING and the FINE ARTS.

4. MUSIC.

5. HOUSEHOLD ECONOMY.

6. GEOGRAPHY and ASTRONOMY.

7. NATURAL HISTORY, including Geology, Mineralogy, Botany, Zoology, and Physiology.

8. CHEMISTRY.

9. PHYSICS.

10. MECHANICS.

11. APPARATUS for teaching persons of deficient faculties.—a. Persons physically deficient, such as the deaf, dumb, and blind.

b. Persons mentally deficient, such as

idiots, imbeciles, and the insane.

12. PHYSICAL TRAINING, or means for promoting the health of the body.

V. In organizing the Museum, the Committee on Education hope to have the co-operation of all who are interested in the object.

Books, diagrams, maps, apparatus, &c., intended for the Museum, may be addressed to the Secretary of the Department of Science and Art, Cromwell Gardens, South Kensington, London (W.), care of Mr. Richard Thompson, Superintendent of the Museum.

COMMITTEE OF COUNCIL ON EDUCATION, South Kensington, London, W.

Regulations for the guidance of Contributors to

the Educational Museum:—1. The Museum will be open free to the Public, on Mondays, Tuesdays, and Saturdays; and on Wednesdays, Thursdays, and Fridays, to Students and the Public generally, on payment of 6d. each, or a subscription of 10s. a year or 5s. a quarter, payable in advance.

2. Contributions forwarded for exhibition will be classified and arranged by the Officers of the Museum.

3. Exhibitors will be requested to attach descriptive labels, giving the names, uses, &c., to their contributions; the size and form of such label to be hereafter determined.

4. It is desirable that the usual retail price should be distinctly marked on all articles sent for exhibition.

5. As it is the wish of the Committee on Education, and the evident interest of exhibitors, that the Museum should at all times represent the then existing state of Educational appliances, every facility will be given for the introduction of new inventions, books, diagrams, &c., relative to Education.

6. Books, and other educational appliances out of date, or the utility of which may have been superseded, or articles that may have become injured, may be removed or replaced at the option of the Exhibitor.

7. To prevent confusion, and the possibility of articles being removed by persons not properly authorized by the Exhibitor, due notice in writing of the intention to remove articles must be given, and no book or object is to be removed until it has been exhibited at least twelve months.

8. In order to protect the property of Exhibitors, no article will be allowed to be removed from the Museum without a written authority from the Superintendent.

9. On Wednesdays, Thursdays, and Fridays, the books and other objects in the Museum will be open to Students and to the Public for inspection and study, under such regulations as are usually found convenient in a Public Library.

10. A Catalogue will from time to be pub-

lished, so as to keep pace as much as possible with the additions to the Museum, and the withdrawals from it.

11. Exhibitors desirous of advertising in the Catalogue, may send their Prospectuses, Illustrations, Price Lists, &c., 1000 copies at a time, and printed in demy 8vo., so that they may be bound up in the Catalogue. The binding will be free of cost to the Exhibitor; but Exhibitors will bear any depreciation in the value of the objects from their use by visitors.

12. All contributions forwarded to the Museum, to be addressed to the Secretary of the Department of Science and Art, Cromwell Gardens, South Kensington, care of Richard A. Thompson, Esq., Superintendent of the Museum.

COMMITTEE OF COUNCIL ON EDUCATION. ART-DIVISION. MINUTE.

ELEMENTARY DRAWING.—At Cromwell Gardens, South Kensington, 5th March, 1857.

The Lords of the Committee of Privy Council on Education having resolved, by their Minute of 24th February, 1857 (a copy of which is appended), that all teachers who hold certificates of merit and are under inspection, and who pass satisfactory examinations in the following branches of drawing, viz.:—

a. Freehand	£2
b. Linear Geometry	1
c. Linear Perspective	1
d. Model and Object Drawing	1

shall receive annually the sums attached to such subjects, on condition of teaching drawing satisfactorily in their schools;—

Resolved further:—That the same advantages shall be extended to other schoolmasters and mistresses of schools for the poor, not under inspection of the Committee of Council on Education; and that the Department of Science and Art shall make similar payments to all those schoolmasters and mistresses who take certificates of the second grade, and who send their students for examination in drawing to the annual examinations held in the several schools of art throughout the country.

ELEMENTARY DRAWING.—At the Council Chamber, Whitehall (the 24th day of February, 1857), by the Right Honourable the Lords of the Committee of Her Majesty's Most Honourable Privy Council on Education.

Read;—A Minute by their Lordships, dated 26th January, 1854, for the encouragement of elementary drawing;—

Resolved;—To cancel that Minute; and, in lieu thereof, to provide as follows:—

1. Pupil-teachers will be admitted to study and practise at any drawing schools in connection with the Department of Science and Art, at a cost to themselves of only half the ordinary fees payable for instruction.

2. Pupil-teachers, if attending such drawing schools, will not be required to perform an exercise in drawing at the annual examination of pupil teachers before Her Majesty's Inspector, but will have another opportunity of being examined in connection with the drawing school itself, so as to obtain the prizes hereinafter mentioned.

3. Pupil-teachers, if not attending such drawing schools, will have an opportunity of performing an exercise in drawing at the annual examination of pupil teachers before Her Majesty's Inspector; such exercise to be forwarded to the Committee of Council on Education, as part of the Inspector's report, and, after revision in the Department of Science and Art, to be of the same effect in obtaining prizes as if it had been performed in connection with the drawing school pursuant to the last preceding paragraph.

4. Pupil-teachers, if not attending such drawing schools, but permitted (by arrangements between the managers of the schools in which they are apprenticed and the master of any such drawing school) to be annually examined there instead of at the annual examination of pupil-teachers before Her Majesty's Inspector, may obtain the same prizes as are offered in the two preceding paragraphs.

5. A memorandum of full competency to give instruction in drawing will be recorded in favour of those candidates only who have successfully performed each of the five exercises enumerated in the Schedule No. 1.

6. Drawing exercises will continue to form part of the general examinations in December (in Scotland, June) of candidates for certificates of merit.

7. Teachers already holding certificates of merit, may either attend the December examinations at the training schools before Her Majesty's Inspectors, in order to perform the exercises in drawing, or they may make any arrangement which may be in their power for attendance at a drawing school

in connection with the Department of Science and Art, in order to be examined there. Their exercises, whether worked at the December examination or in connection with the drawing school, pass equally for revision to the Department of Science and Art; and it is matter of indifference whether the notice of success reaches the Committee of Council as part of the report upon the December examinations or at any other time.

The payments mentioned in the following paragraphs are confined to certified or registered teachers, and are independent of the prizes mentioned in Schedule No. 2.

8. Teachers conditionally entitled, as the holders of certificates of merit, to augmentation of salary, will receive, in addition to such augmentation, the following annual payments, according to the exercises (see Schedule No. 1) which they may be registered as having passed in drawing:—

a. Freehand	£2	Memorandum
b. Linear Geometry	1	of full competency
c. Linear Perspective	1	tency to give
d. Model and Object Drawing	1	instruction in drawing.

These several annual payments will be made only as incident to the Augmentation Grant, and will be subject therefore to all its conditions.

Registered teachers in charge of apprentices will receive the same payments as incident (when allowed) to their gratuity for the special instruction of such apprentices.

If it should be reported to the Committee of Council on Education, that undue preference were given to drawing over other necessary branches of elementary instruction, or that drawing were not made conducive to good writing, or that drawing itself were not properly taught, throughout the school, these payments would be liable to be withdrawn.

9. If a certified or registered teacher with apprentices hold a memorandum of full competency in drawing, such teacher may (in addition to the sums mentioned in the last paragraph, and also in addition to the ordinary augmentation and gratuity) receive the sum of 1*l.* for every apprentice up to a maximum of 3*l.*, who has been entirely instructed by such teacher in drawing, and who satisfies the Department of Science and Art with his (or her) annual progress in exercises graduated according to the scale in Schedule No. 1. As to the time and place of examination in such cases, see paragraphs 2 and 3, *supra*.

10. No student in training, and no acting teacher, in those cases where they are respectively required to pass the general examination before Her Majesty's inspector as for the end of the first year, may obtain a memorandum of competency in more than two of the branches enumerated in Schedule No. 1 at the same time.

Candidates (whether students or teachers) of the second year are not subject to the last preceding limitation.

11. Candidates (whether apprentices, students, or teachers) will not be required to pass again any of the exercises for which they may already have obtained prizes; but each exercise as it is passed successfully, at whatever stage of their scholastic career, will be duly registered as so much gained towards the memorandum of full competency mentioned in paragraph 8, and, in the mean time, will bear the corresponding value as soon as the candidate has become a certified or registered teacher.

SCHEDULE No. 1.—First year.—Drawing freehand from flat examples.

Second year.—Linear geometry, by means of instruments.

Third year.—Linear perspective, by means of instruments, applied to geometrical figures plane and solid.

Fourth year.—Freehand drawing, and shading, from solid models.

Fifth year.—Freehand drawing, and shading, of natural forms and objects, from memory.

SCHEDULE No. 2.—The prizes will consist of books, materials, and instruments calculated to be of use to the successful candidates in their further progress. A certain liberty of choice will be accorded to the candidates themselves, who, with the exercises, will be furnished with a list of the prizes, from among which they may mark upon their own exercise the particular prize they would prefer to obtain for it, if successful.

The following is the list of the prizes:—

1. Box of mathematical instruments.
2. Box of colours.
3. Drawing-board, T square, and angles.
4. Burchett's Practical Geometry and Burchett's Perspective.
5. Wornum's Analysis of Ornament, and Lindley's School Botany.
6. Cotman's pencil landscapes.
7. Cotman's Sepia landscapes.
8. Case of implements and materials for chalk drawing.

BOOKS FOR THE USE OF SCHOOLS,

ISSUED UNDER THE AUTHORITY OF THE

DEPARTMENT OF SCIENCE AND ART.

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